REMARKS

In a telephone call to Elin Hartrum on October 31, 2005, the Examiner required restriction as follows:

Group I. Claims 1-23 and 27, drawn to compounds and pharmaceutical compositions containing the compounds of claims 1-23..

Group II. Claims 28-33, drawn to a process for preparing the compounds of Group I.

Group III Claims 24-26, drawn to methods of treating a disease with the compounds of Group I

An election was made to prosecute the invention of Group I. Applicants hereby confirm that election without traverse. Accordingly, claims 28-33 and 24-26 are withdrawn from consideration, and claims 1-23 and 27 are currently pending.

REJECTIONS

The pending claims have been rejected as follows:

1. Claims 1-6, 11, 13, 15, 16, 20-22, and 27 under 35 U.S.C. §112, Second Paragraph;

2. Claims 1-23 and 27 under the judicially created doctrine of obviousness-type double patenting over Zablocki et al. (U.S. Patent 6,214,807, claims 1-28), U.S. Patent 6,885,818 (claim 1), and U.S. Patent 6,770, 634 (claims 1, 5 and 6) in view of Klotz et al. (Naunyn-Schmiedeberg's Arch. Pharm. (1999), 360, 103-108.;

3. Claims 1-23 and 27 under 35 U.S.C. §103(a) as being unpatentable over Zablocki et al. (U.S. Patent 6,214,807) in view of Klotz et al. (Naunyn-Schmiedeberg's Arch. Pharm. (1999), 360, 103-108.

In the present amendment, claims 24-26 and 28-33 have been canceled. Thus, claims 1-30 and 42 are pending in the application.

Claims 24-26 and 28-33 have been canceled in accordance with the Examiner's requirement for restriction. Cancellation of these claims is without prejudice, without intent to abandon any previously claimed subject matter, and without intent to acquiesce in any rejection of record. Applicants reserve the right to reintroduce the canceled claims in a continuing application.

The Examiner's rejections and objections are addressed by the arguments presented below.

Rejection of Claims 1-6, 11, 13, 15, 16, 20-22, and 27 under 35 U.S.C. §112, Second Paragraph

The Examiner has rejected Claims 1-6, 11, 13, 15, 16, 20-22, and 27 under 35 U.S.C. §112, Second Paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as his invention. Applicants respectfully traverse the rejection.

The Examiner alleges that the use of the term "substituted" renders the claims indefinite. Applicants respectfully disagree. The term "optionally substituted" is defined at page 13, line 1, of the specification, as follows:

> "Optional" or "optionally" means that the subsequently described event or circumstance may or may not occur, and that the description includes instances where said event or circumstance occurs and instances in which it does not.

Given that the specification provides a clear and concise description of the meaning of all occurrences of the term "optionally substituted", the claims cannot be said to be indefinite. For example, the definition of "lower alkyl" and "substituted lower alkyl" is provided on page 5, lines 14-21 of the specification. The definition of "cycloalkyl" is provided on page 9, lines 26-31 of the specification, and the definition of the term "substituted cycloalkyl" is provided on page 10, lines 1-12 of the specification. This is also true for the terms "aryl" and "substituted aryl", "heteroaryl" and "substituted heteroaryl", and so on.

Applicants respectfully submit that one of ordinary skill in the art would be fully apprised of the intended scope of the claims. The rejection of Claims 1-6, 11, 13, 15, 16, 20-22, and 27 under 35 U.S.C. §112, Second Paragraph as being indefinite should be withdrawn.

Rejection of Claims 1-23 and 27 under the judicially created doctrine of obviousness-type double patenting over Zablocki et al. (U.S. Patent 6,214,807, claims 1-28), U.S. Patent 6,885,818 (claim 1), and U.S. Patent 6,770, 634 (claims 1, 5 and 6) in view of Klotz et al. (Naunyn-Schmiedeberg's Arch. Pharm. (1999), 360, 103-108

The Examiner has rejected claims 1-23 and 27 under the judicially created doctrine of obviousness-type double patenting over Zablocki et al. (U.S. Patent 6,214,807, claims 1-28), U.S. Patent 6,885,818 (claim 1), and U.S. Patent 6,770,634 (claims 1, 5 and 6) in view of Klotz et al. (Naunyn-Schmiedeberg's Arch. Pharm. (1999), 360, 103-108. Applicants respectfully traverse the rejection.

As an initial observation, it cannot possibly be correct (as stated on page 7, lines 8-9 of the instant Office action) that the "2-adenosine C-pyrazole compounds of Zablocki are within the scope of the instant claims". As acknowledged by the Examiner on page 7, lines 11-12, "it is noted that Zablocki et al. do not disclose the N-substitution at C-6". Therefore, the statement that "the instantly claimed invention differs from the Zablocki at al. patents by claiming adenosine derivatives wherein C-2 is substituted with a substituted triple bond" is equally incorrect. None of the Zablocki compounds are substituted at N-6. Accordingly, the instant claims are different from those disclosed in Zablocki et al. (U.S. Patent 6,214,807, U.S. Patent 6,885,818, and U.S. Patent 6,770, 634).

Additionally, the Examiner is incorrect in stating that the instant invention "is directed to a compound of Formula I (adenosine prodrug, claim 1)". Presumably, based upon this statement, the Examiner believes the compounds of Formula I are themselves prodrugs. This is incorrect. Certainly prodrugs of the compounds of Formula I are

within the scope of the invention, but the compounds of Formula I are not themselves prodrugs.

The Examiner also states that the "claims are co-extensive" with Klotz et al. Applicants respectfully submit that is incorrect. Klotz discloses no compounds that are substituted at N-6, whereas all of Applicants compounds have that property. The only exception to that statement is that there is (as the Examiner points out) a general disclosure on page 103, last paragraph, of Klotz et al that mentions that A_3 agonists are known that have an N-6 benzyl substituent. Such a general statement cannot be held to be a disclosure of any compound within the scope of Applicants invention, particularly as it is stated that "these and other N^6-substituted compounds suffer from the disadvantage of typically A_1 affinity. Applicants respectfully submit that such a statement teaches away from Applicants' invention, as the compounds of Formula I do not have the "disadvantage of" A_1 affinity.

Accordingly, there is no overlap between the claims of the Zablocki patents and those of the present invention, and no overlap with the Klotz disclosure. Applicants respectfully submit that the rejection of claims 1-23 and 27 under the judicially created doctrine of obviousness-type double patenting over Zablocki et al. in view of Klotz et al. should be withdrawn.

Rejection of Claims 1-23 and 27 under 35 U.S.C. §103(a) as being unpatentable over Zablocki et al. (U.S. Patent 6,214,807) in view of Klotz et al. (Naunyn-Schmiedeberg's Arch. Pharm. (1999), 360, 103-108.

The Examiner has rejected Claims 1-23 and 27 under 35 U.S.C. §103(a) as being unpatentable over Zablocki et al. (U.S. Patent 6,214,807) in view of Klotz et al. (Naunyn-Schmiedeberg's Arch. Pharm. (1999), 360, 103-108. Applicants respectfully traverse the rejection.

As maintained above:

1) The compounds of Formula I are not adenosine prodrugs.

2) The compounds disclosed in Zablocki are not within the scope of the instant claims.

3) It is not correct to state that the only difference between the compounds of the present invention and those disclosed in the Zablocki at al. patents is the presence of C-2 substituted with a substituted triple bond.

4) A general statement in Klotz et al. that A_3 agonists are known that have an N-6 benzyl substituent cannot be held to be a disclosure of any compound within the scope of Applicants invention.

It should also be pointed out that the compounds disclosed in Zablocki are not only not within the scope of the present invention, but they also have vastly different properties. The compounds of Zablocki are all A_{2A} adenosine receptor agonists, whereas the compounds of the present invention are all selective agonists of the A_3 adenosine receptor. One of ordinary skill in the art would not look to a disclosure of A_{2A} adenosine receptor agonists and assume that modifying the N-6 position of those compounds would drastically change the properties of the compounds from A_{2A} adenosine receptor agonism to A_3 adenosine receptor agonism. This defect is not cured by the disclosure of Klotz et al. of A_3 adenosine receptor agonists that are all unsubstituted at the N-6 position, except for a vague disclosure that N-6 benzyl A_3 adenosine receptor agonists are known. Applicants respectfully submit that the rejection of Claims 1-23 and 27 under 35 U.S.C. §103(a) as being unpatentable over Zablocki et al. (U.S. Patent 6,214,807) in view of Klotz et al. (Naunyn-Schmiedeberg's Arch. Pharm. (1999), 360, 103-108 should be withdrawn.

CONCLUSION

For the foregoing reasons, Applicants submit that the claims are in condition for allowance. A Notice of Allowance is requested, and a prompt mailing thereof would be much appreciated.

Should the Examiner have any questions, he is invited to contact the undersigned attorney at (650) 384-8650.

Respectfully submitted,

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